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Appeal Brief
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Atty. Docket No. 1501-1111
PATENTS (3)
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8-19-03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE
THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Jan ERIKSSON

Serial No. 09/581,911

Appeal No. _____

Filed June 19, 2000

GROUP 3643

ANIMAL RELATED APPARATUS

APPEAL BRIEF

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1. Real Party in Interest

The real party in interest in this appeal is the assignee, DeLaval Holding AB of Tumba, Sweden.

2. Related Appeals and Interferences

None.

3. Status of Claims

Claims 1-10 are pending, from whose final rejection this appeal is taken. The claims are listed in the attached Appendix.

4. Status of Amendments

There are no outstanding amendments. The claims have not been amended since the preliminary amendment submitted with the application transmittal letter.

5. Summary of Invention

Figure 1 illustrates a robot (6) with arm (8) that moves animal related devices (12a-milking equipment) toward an animal (cow), for performing an operation associated with the animal and the installed animal related device (milking).

The invention provides for improved maintenance of such a system by associating with the animal, the animal related device, and the robot: 1) a registering means (20a) and 2) a control means.

The registering means accumulates a running value. The control means generates a signal when a predetermined threshold value of the running value is reached.

The predetermined threshold value is set for each animal related device, the driving means of the robot, and a complete animal related operation.

Correspondingly, the registering means may register the running value of: 1) each animal related

device, 2) the driving means of the robot, and 3) the running time of the complete animal related operation. See claims 2-4.

For example, the animal related device may be a milking pulsator, the registering means tracks the pulsator running time, and the control means signals when the pulsator reaches its predetermined cumulative running time. Alternatively, the running value could be the number of pulsations generated by the pulsator. See claims 5-7.

Other recited examples are the running time of a teat location device (claim 8), the running time of a teat cleaning device (claim 9), and running time of a gate operator (claim 10).

Accurate monitoring of running values and timely signaling when reaching a threshold value allows for efficient maintenance of equipment or completion of a task when monitoring the running time of an animal operation.

6. Issues

A first issue on appeal is whether claims 1-4 and 8-10 were properly rejected as unpatentable under §103 as obvious over JAKOBSON et al. 4,508,058 in view of FINGER (EP 0244642).

A second issue on appeal is whether claims 5-7 were properly rejected as unpatentable under §103 as obvious over JAKOBSON et al. in view of INNINGS et al. (WO 96/36212).

7. Grouping of Claims

As to the first issue on appeal, claims 1-4 and 8-10 stand together.

As to the second issue on appeal, claims 5-7 stand together.

8. Arguments

Arguments Concerning the First Issue

JAKOBSON et al. fairly discloses the recited robot for moving an animal related device towards an animal using a robot arm.

However, JAKOBSON et al. does not disclose the recited "registering means ... for registering a cumulative value" or the recited "control means ... to generate a signal when a predetermined threshold value has been reached."

For the recited registering means, the Examiner offers JAKOBSON et al. elements 14 and 18 (Official Action of February 13, 2003, page 2, last paragraph).

At column 6, beginning with line 10, JAKOBSON et al. discloses a robot device which comprises a first double sensor means 14 and a second sensor means 18.

The following disclosure teaches that the sensors are provided to avoid the milking means coming into contact with the udder and obstruct milking. See lines 17-25.

Beginning at line 28, "the position for the teats in lateral and longitudinal senses is sensed by means of the first sensor means 14." At lines 33-35, "the position of the teats in the vertical sense is sensed by means of the second sensor means 18."

At lines 52-54, "[t]he sensors are principally of known design and are not described in detail, ..." This does not teach the sensors recited.

Claim 1 recites "a registering means ... for registering a cumulative running value." The JAKOBSON et al. sensors 14 and 18 are merely proximity sensors and fail to meet this recitation.

Since JAKOBSON et al. does not include the recited registering means, the rejection fails.

For the recited control means, the Examiner offers JAKOBSON et al. column 6, lines 27-28 (Official Action of February 13, 2003, page 2, last paragraph).

The sentence that includes the relied-upon passage (shown in bold) reads "When a cow has entered the stall and takes the position shown in FIG. 7 and **the computer 5 emits a signal that the cow is to be milked**, the position for the teats in lateral and longitudinal senses is sensed by means of the first sensor means 14, whereupon the support 16 with the milking means 17 suspended in U-shaped parts 19 of the support is displaced by means of the arm 15 to a position straight below the cow's udder."

Although it is true that "a" signal is generated, as acknowledged by the Official Action (the last three lines of Official Action of February 13, 2003, page 2), the generated signal is not for that recited since "Jakobson et al is silent on a predetermined threshold value and running value set for each of the animal related device, the robot, and the complete related operation."

Since JAKOBSON et al. does not disclose a predetermined threshold value, it follows that JAKOBSON et al. cannot disclose the recited control means to generate a signal when a predetermined threshold value has been reached.

Since JAKOBSON et al. does not include the recited control means, the rejection again fails.

In summary, as to JAKOBSON et al., the technology fails well short of that recited in the pending claims..

Further, the Examiner implicitly acknowledges that there is no motivation in JAKOBSON et al. to modify the disclosed system to that recited in the present claims in admitting that "Jakobson et al is silent on a predetermined threshold value and running value set for each of the animal related device, the robot, and the complete related operation.".

FINGER is offered as disclosing the practice of monitoring total operating time of a machine and that the cumulative operating measurement provides a basis for determining when the device should receive maintenance.

Thus, the Examiner concludes that, in view of this practice, it would have been obvious to modify JAKOBSON et al. to the recited invention.

Indeed, FINGER discloses in column 1, lines 33-39, that it was known to have a cumulative operation measurement system. See the electromechanical counter is disclosed in column 2, lines 5-10. Further, it is stated that such counters suffer from human operators taking a visual reading of the elapsed time indicator and recording that reading manually.

Note that although FINGER recognized problems in the state of the art systems, FINGER did not suggest the present invention. This is evidence of the invention being non-obvious since the reference clearly is aware of the problem addressed by the invention yet fails to offer the present solution or any comparable solution.

FINGER shows that there was a recognized problem and a need for a solution, yet the Examiner has failed to show that the art had solved the problem. This is clear evidence that the recited invention is non-obvious.

See that claim 1 recites "said predetermined threshold value is set for each of said at least one animal related device, said robot and a complete animal related operation." The claim requires the Examiner show that establishing predetermined threshold values for all three of these items is obvious. It is not enough to show that one of the listed items would be obvious.

Neither JAKOBSON et al. nor FINGER make this teaching.

For all these reasons, the obviousness rejection fails.

Arguments Concerning the Second Issue

The Examiner offers INNINGS et al. to show the operation of milking equipment with regards to claims 5-7.

INNINGS et al. fairly show a pulsator, a teatcup with movement sensor, and an alarm to signal a malfunction in response to the sensor sensing a movement of the teatcup liner.

More specifically, INNINGS et al. fairly teach an alarm to signal a malfunction in response to the sensor sensing an abrupt movement of the teatcup liner when the teatcup liner moves to an open or closed position. Further, see the Abstract of the reference which clearly discloses that "[i]f the sensed movement does **not** fulfill a predetermined condition, a malfunction is signaled."

The teaching of INNINGS et al. is exactly opposite to that recited. That is, claim 1 recites "to generate a signal when a predetermined threshold value has been reached" whereas INNINGS et al. teach to signal if the predetermined condition is not fulfilled.

Further, the alarm is not related to the running value of the pulsator (claim 5), e.g., the running time of the pulsator (claim 6), or the number of pulsations generated (claim 7).

There is no disclosure as to a "control means being adapted to register the cumulative running time value of said pulsator" per claim 5.

INNINGS et al. fail to teach all the recitations of claims 5-7 which are acknowledged to be missing from JAKOBSON et al. Accordingly, the combination fails to render obvious these claims.

Thus, the obviousness rejection fails.

9. Conclusion

In view of foregoing, it follows that: 1) the rejection of claim 14 as unpatentable under 102(b) as being anticipated by WREGHITT et al.; 2) the rejection of claims 8 and 14 as unpatentable under 103(a) as obvious over IDE in view of MAXWELL et al.; and 3) the rejection of claim 9 under 103(a) as obvious over IDE and MAXWELL et al. as applied to claim 8 in further view of FURUKAWA, are all improper and should be reversed.

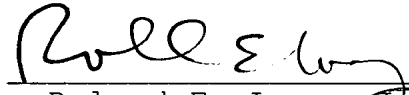
ERIKSSON S.N. 09/581,911
Appeal Brief filed August 12, 2003
Attorney Docket No. 1501-1111

Reversal of these rejections is accordingly
respectfully solicited.

Respectfully submitted,

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August 12, 2003

10. Appendix

The claims on appeal:

1. An animal related apparatus, comprising a robot (6) for performing an animal related operation, said robot being associated with a control means (23), and at least one animal related device (12a, 12b) associated with said control means, said robot being provided with a robot arm (8) adapted to move said animal related device towards an animal, characterised in that

a registering means (20a, 20b,...,20g) is provided for registering a cumulative running value;

said control means being adapted to generate a signal when a predetermined threshold value has been reached; and wherein

said predetermined threshold value is set for each of said at least one animal related device, said robot and a complete animal related operation.

2. An apparatus according to claim 1, characterised in that

said registering means (20a, 20b,...,20g) is adapted to register the running value of said at least one animal related device.

3. An apparatus according to claim 1, characterised in that

said registering means (20a, 20b,...,20g) is adapted to register the running value of a driving means (22) of said robot (6).

4. An apparatus according to claim 1, characterised in that

said running value is the running time of said complete animal related operation.

5. An apparatus according to claim 1, characterised in that

said animal related device comprises milking equipment having a teatcup (12a) provided with a shell and a liner forming an intermediate space;

said space being connectable to a source of vacuum
(24) via a pulsator (26) for creating a pulsating vacuum,

said pulsator being associated with said control
means (23), and

said control means being adapted to register the
cumulative running value of said pulsator.

6. An apparatus according to claim 5,
characterised in that

said running value is running time of said
pulsator (26).

7. An apparatus according to claim 5,
characterised in that

said running value is a number of pulsations
generated by said pulsator (26).

8. An apparatus according to claim 1,
characterised in that

said animal related device comprises a teat
location device (14) and said running value being running
time thereof.

9. An apparatus according to claim 1, characterised in that

said animal related device comprises a teat cleaning device (12b) and said running value being running time thereof.

10. An apparatus according to claim 1, characterised in that

said apparatus further comprises a gate means (18) for restricting movement of an animal from an animal space (4);

said gate means (18) being opened and closed by means of a driving means (19); and

said running value being said running time of said driving means.